

The Power of Provisionality

An Experimental Evaluation of Idea Appearance in Online Knowledge Creation



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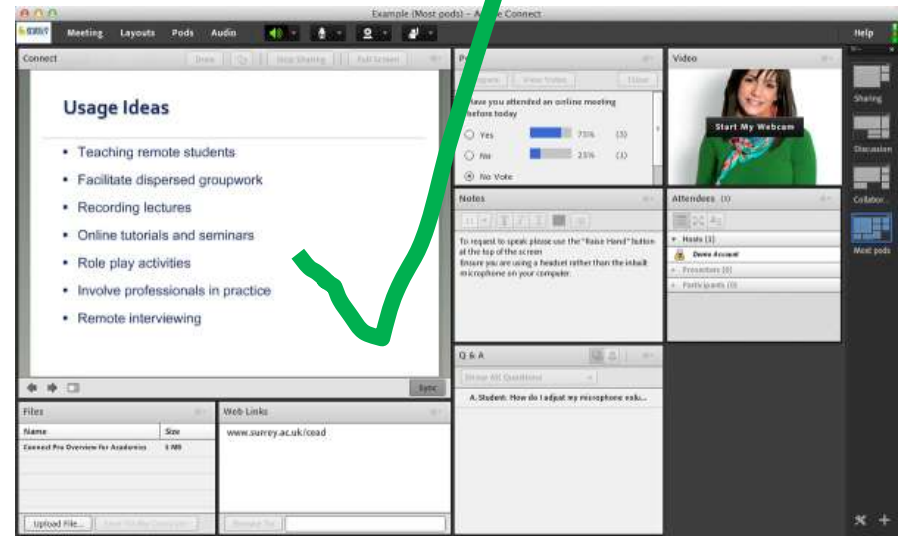
Agenda

- Digital Ba
- Dual Pathway to Creativity Model and Fixation
- Perceived Finishedness (PF)
- Disfluency
- Research Question & Theoretical Model
- Method
- Results
- Conclusion



Digital Ba

Ba: “A shared space for emerging relationships”
(Nonaka & Konno, 1998)



Dual Pathway to Creativity Model (Nijstad et al., 2010)

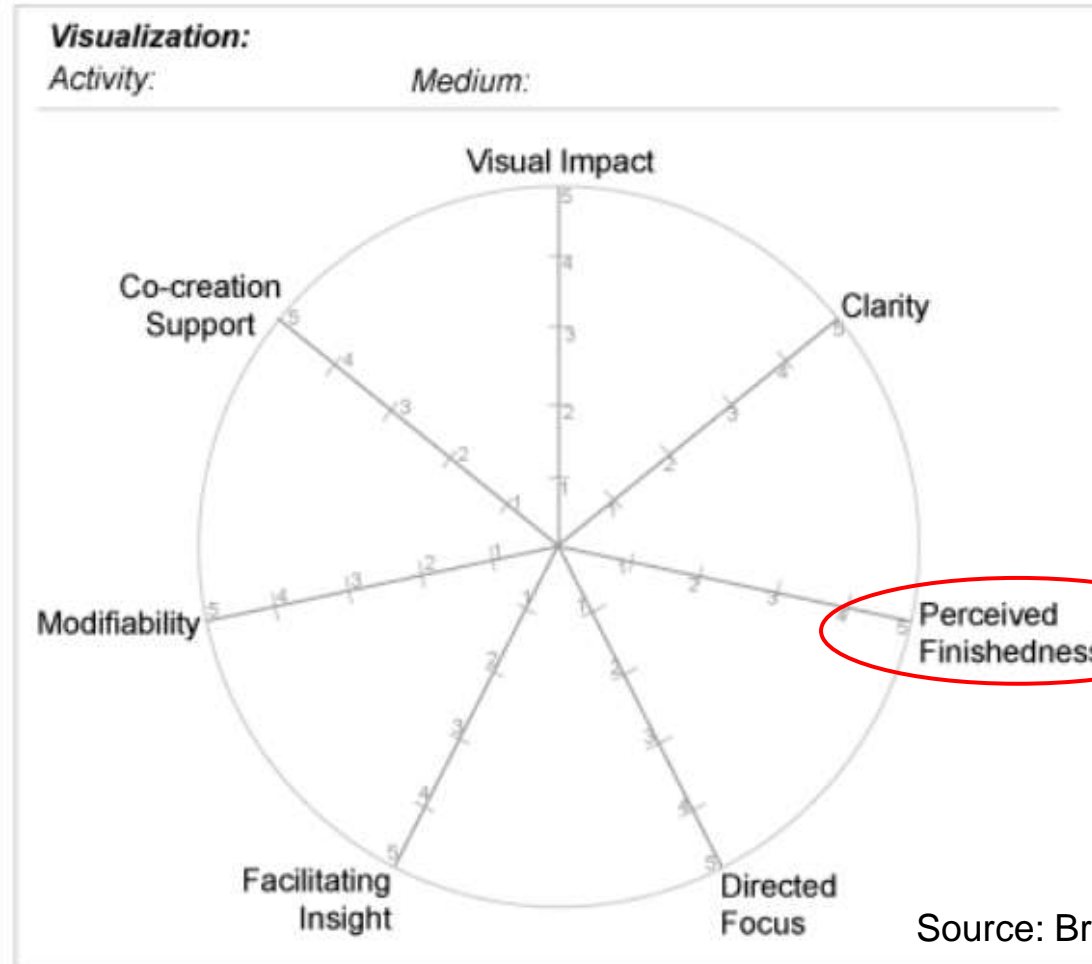
- Creative ideas arise from search in semantic memory
- Two complementary pathways to creative ideas:



a) Persistence Pathway => Feasibility

b) Flexibility Pathway => Originality

Collaborative Dimensions: A Framework for Evaluating the Appearance of Ideas



Source: Bresciani & Eppler, 2013

Perceived Finishedness (PF)

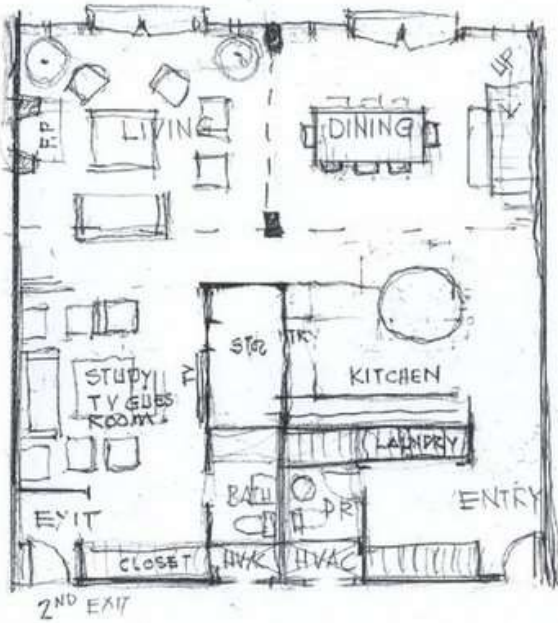
Does the visualisation invite contributions and modifications or does it resemble a finished polished product?



- Skizzen



Perceived Finishedness (PF)



Ideas are Modified by Elaborative Dialogue

Elaboration: the addition of detail to an idea
(Hogan, Nastasi & Pressley, 1999)

How might I spread awareness about my research topic?



Promote via social networks



Start a LinkedIn group

PF Operationalisation



Pre-tested PF values



PF = 2.48/5.0



PF = 4.0/5.0

Typography

Disfluency

“The subjective experience of difficulty while processing information” (Alter, Oppenheimer & Epley, 2013)

This typeface (Daniel) is more difficult to process than this typeface (Arial).

This typeface is easy to process.

Disfluency is typically activated by visual elements such as difficult to read typefaces.

Disfluency

Pedagogists refer to disfluency as a “desirable difficulty” (Bjork, 1994)

Disfluency has been shown to:

- Improve learning outcomes during information uptake (Alter, Oppenheimer, Eppley & Eyre, 2007)
- Improved comprehension, focus and retention of information (Weltman & Eakin, 2007)
- Activate analytic reasoning (Alter, Oppenheimer, Eppley & Eyre, 2007)

Disfluency Operationalisation

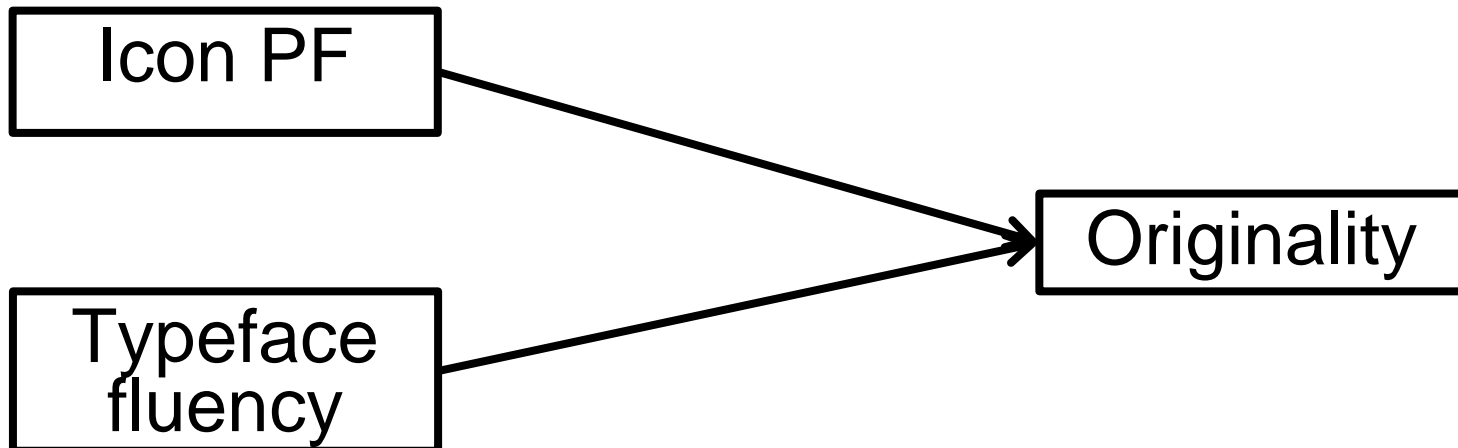
The experiment used this typeface (Arial) for a fluent, easy-to-process typeface.

The experiment used this typeface (Daniel) for a disfluent, difficult-to-process typeface.



Research Question & Theoretical Model

Do apparently unfinished icons make participants more likely to add detail to other participants' ideas?

Does icon appearance interact with the typeface ease of processing to raise idea originality?



Computer-Mediated Dyadic Ideation Experiment on Perceived Finishedness: Setup

2 ² Factorial Experiment		Input 2: Typeface	
Input 1: Icon		Daniel font	Arial font
		Low PF/Disfluent	Low PF/Fluent
		High PF/Disfluent	High PF/Fluent

Ideation task: “You are a taskforce advising the programme’s strategic director. How can the programme’s strategic director increase the programme’s value without significantly changing the course price or the budget? You can suggest any type of change you like.”

Low PF Leads to More Initiation of Elaboration

	Low PF icon	High PF icon
Ideas elaborated upon per 10 minute session	1.68 (s.d. 0.94)	0.93 (s.d. 0.96)
p=.025; 37 dyads n=74		



New idea



Detail: Comment or critique

The Effects of PF

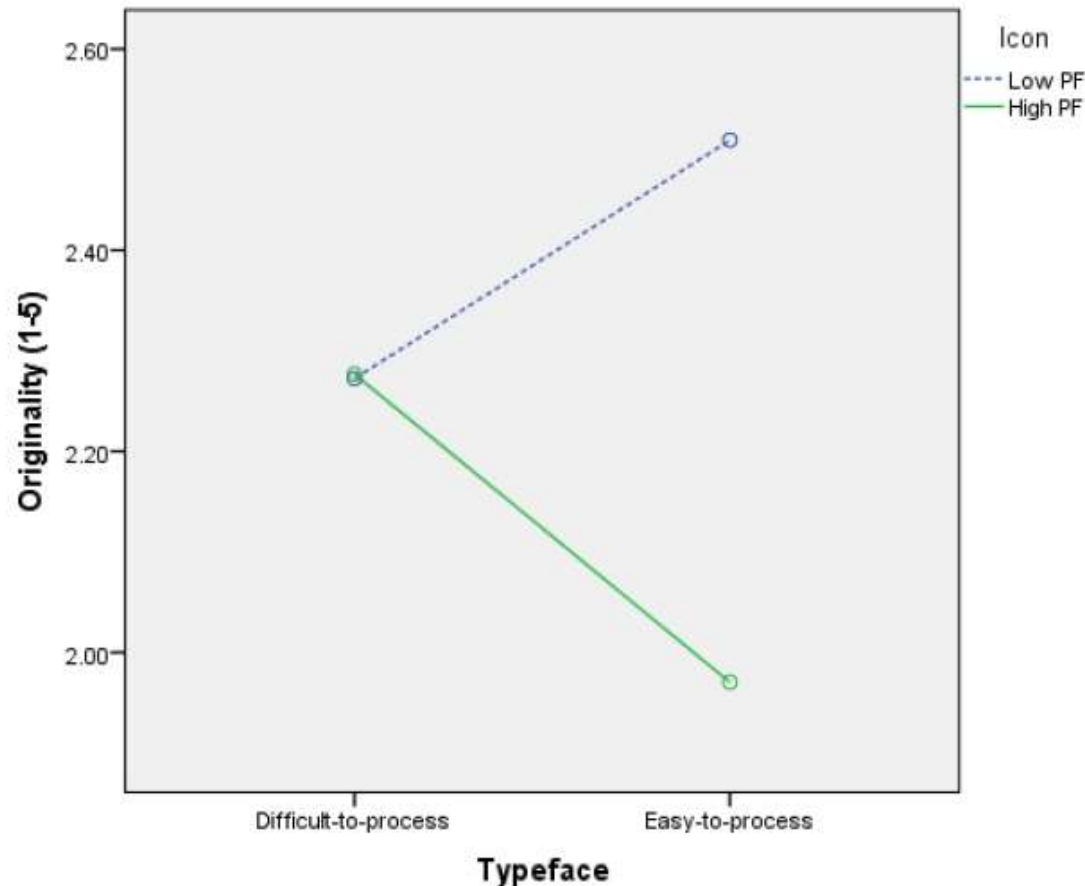


High PF:
Museum
Effect



Low PF:
Workshop
Effect

Result: Together the Low PF Icon and Easy-to-Process Typeface raise Originality



$p = 0.025$; 37 dyads $n = 74$

Conclusion

- Low PF leads to more initiation of elaboration
- Short searches in semantic memory appear useful for creativity
- Low PF is directly applicable in CSS and ideasourcing platforms
- The museum and workshop effects can both be used tactically